

JPRS 83852

8 July 1983

Worldwide Report

ENVIRONMENTAL QUALITY

No. 405

FBIS

FOREIGN BROADCAST INFORMATION SERVICE

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WORLDWIDE REPORT ENVIRONMENTAL QUALITY

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COUNTRY HAS NO AGENCY TO COPE WITH ENVIRONMENTAL DISASTER

Canberra THE WEEKEND AUSTRALIAN in English 7-8 May 83 p 4

[Article by Damien Simonis]

[Text] Despite toxic waste disasters overseas and close calls here, Australia is almost unprotected against environmental contamination and potential disaster.

The US Government has set up the Environmental Protection Agency to combat the problem, but Australia has no such agency.

The problem in Australia is threefold:

There are almost no controls on the use of dangerous chemicals.

Information on use, disposal and storage of chemicals is inadequate.

Australia does not have the facilities for the disposal of hazardous wastes.

With the exceptions of fertilisers, pharmaceuticals and food chemicals--only 15 percent of the chemicals used nationally--there are no laws governing the use, transport, storage or disposal of chemicals.

Hundreds of chemicals still freely used in Australia have been restricted in the United States.

The NSW Government plans to legislate in October for "cradle-to-grave" control over use and disposal of chemicals.

The proposal comes a year after a report slammed the absence of chemical safeguards in Australia. It will make NSW the only State with such guidelines.

But the problem of disposing of the most dangerous of these wastes, such as polychlorinated biphenyls (PCBs) remains unsolved.

Production of PCBs, which were used as insulating oils in electrical equipment, was halted in the United States in 1980.

NSW and Victoria banned importation of PCBs later that year.

Under certain conditions, they release a dioxin-related substance called "furans" which penetrates the food chain.

Leaching

Last year in Japan, rice contaminated by PCBs left consumers with nausea, skin pigmentation, skin lesions and chloracne, a problem also associated with Agent Orange.

There are no facilities in Australia for the destruction of these wastes.

The 1982 report on hazardous chemical waste criticised the lack of effective control of the problem and the lack of information about it.

"Administration of the area has developed largely on an ad hoc basis," the report said.

"The regulation of wastes is less than adequate."

The head of the report committee was a federal MP, Mr John Hodges.

He said NSW and Victoria had made some progress, but "some other States behave as though these hazards don't exist."

"The Willawong facility for disposal in Brisbane can only be described as appalling," he said.

Willawong has been harshly criticised for its handling of wastes. PCBs were claimed to be leaching into the Brisbane River.

The report was the first of its kind to be presented to Federal Parliament, and the shocks were considerable.

Mr Hodges described the measures taken by NSW and Victoria as "interim only."

"The rest of the country hadn't taken any precautions," he said.

"Sound technologies are available to handle storage and disposal...surveys show that these were not being used for 90 percent of wastes.

"Basic information is lacking on the types and quantities of hazardous wastes being generated.

"The outlook for most States, in the short, term is bleak."

Monitored

The NSW Minister for Planning and Environment, Mr Bedford, will present his chemical control legislation later this year. It will permit the NSW Government to monitor and ban any chemicals it considers dangerous either in use or in disposal.

The NSW Government and ICI are also planning to build a treatment plant at Banksmeadow in Sydney for less dangerous wastes that until now were buried at the Metropolitan Waste Disposal Authority's Castlereagh depot.

Local residents are protesting at the siting of the plant close to houses and schools.

The PCBs and other chemicals that cannot be destroyed in NSW are stored by public and private contractors and monitored by the MWDA and the State Pollution Control Commission.

In Victoria, the Department of Environment also supervises storage.

While Mr Bedford has expressed concern at the growing danger of unregulated use and disposal of chemicals, opinion on the danger posed by chemical waste in Australia is varied.

An expert in chemical waste studies at Sydney University said there was a very real danger.

"This is a problem which hasn't received nearly enough attention in Australia," he said.

"I believe the only answer is an incinerator to destroy these wastes--we need one."

But a spokesman for the Sydney MWDA said: "I don't really believe there is much of a problem."

"We are evaluating the possibility of setting up a national incinerator. But this would cost at least a few million dollars. The economics are not crash hot."

The director of the NSW State Pollution Control Commission, Dr Peter Crawford, said the PCBs were only one problem.

"There are plenty of other chemicals being used in industry and stored that are more dangerous in the short term," he said. "We have no facilities to dispose of them and, outside the metropolitan area, no power to enforce proper storage or disposal of chemicals and waste."

Incinerator

There are at least 30,000 different chemicals in use in Australian industry of which 129 are restricted in the United States by the Environmental Protection Agency.

One of the major problems outlined in the chemicals report last year--lack of information--still plagues the authorities.

While Dr Crawford estimated there were between 100 and 200 tonnes of PCBs in the country, a spokesman for the MWDA said there were 350 tonnes of PCBs in Sydney alone.

MR Digby Gascoine, assistant secretary of the Environment Contamination branch of the federal Department of Home Affairs and Environment, said complete details of chemical use and disposal were lacking.

"Whether it's necessary or not to buy a disposal system such as an incinerator depends on how much waste we store and generate," he said.

"But we don't really have the full picture."

There have been many incidents in Australia that luckily have not led to disaster. For instance, last year:

Fires at ICI plants and storage depots in Botany caused toxic illness among firefighters and threatened to engulf highly explosive chemical installations.

At Goodrich's Altona plant in Melbourne, 700 workers were evacuated and plans were drawn up for the evacuation of residents in a 6km radius after leaks were discovered in storage tanks of vinyl chloride.

Hundreds of corroded drums containing combustible waste were used as a barricade outside a Melbourne theatre.

In NSW, houses have been built on top of dumps of radioactive material.

CSO: 5000/7584

AUSTRALIA

EPA PROBING ILLEGAL MERCURY DUMPING IN MELBOURNE AREA

Melbourne THE AGE in English 11 May 83 p 3

[Article by Peter Roberts]

[Text] The Environment Protection Authority is seeking evidence of illegal mercury dumping into nine creeks and drains around Melbourne and Geelong.

The move comes after reports of high levels of mercury in fish and shellfish in Port Phillip Bay.

Mercury levels as much as 50 percent above world health standards have been detected in flathead caught in the bay by the State Government's Fisheries and Wildlife Division.

Flathead from 10 of 23 sites recently surveyed in the bay were contaminated by mercury at a level higher than the .5 parts per million (PPM) level set as a maximum for fish by the Health Commission. Flathead caught at one site contained an average of 0.76 ppm of mercury.

Mr Tim Harding, the EPA's principal water quality officer, outlined the authority's offensive against mercury polluters at a Melbourne seminar yesterday. He said later that the nine creeks were identified as "problem areas" after a survey of water quality readings taken during the past year.

"Our inspectors are following it up to try to locate the sources of the mercury," Mr Harding said. "If any illegal discharges are found they will be stopped and prosecutions will be launched."

Mr Harding said the nine creeks and drains carried water polluted with more than one part per billion of mercury. The creeks range from the Elizabeth Street main drain in the city to outlet drains to Port Phillip Bay at Beaumaris, Frankston and Cairn. Other drains and creeks lead into Kororoit Creek and Maribyrnong River in the western suburbs and into Corio Bay in Geelong.

"We were not aware of any licensed discharges in these drains and creeks," Mr Harding said. "We are trying to see if we can find any."

EPA inspectors are now conducting spot checks along the drains and waterways and interviewing factory managers to try to pinpoint the sources of pollution.

The State Government estimates that 340 kilograms of mercury reaches Port Phillip Bay each year from sources such as industry, agriculture, laboratories, dental surgeries and from old gold mine tailing dumps.

Yesterday's conference, which was organised by the Royal Australian Chemical Institute, was told that bay mercury levels were three times that of ocean water. Dr David Smith, a lecturer in marine chemistry at Melbourne University, said these results were tentative because they might have been affected by mercury in paint on the hull of the sampling boat.

However, his figures show a progressive dropping of mercury levels from his northern part of Port Phillip Bay towards the south. Figures from Bass Strait were about one-third the level of Hobson's Bay near Melbourne.

Mr Harding also told the conference that surveys of two species of flathead found in Port Phillip Bay showed that the bay was contaminated by mercury.

"Flathead from Port Phillip Bay have not much lower mercury concentrations than those from contaminated waters of the Derwent Estuary in Tasmania," Mr Harding said. "The same study revealed a decrease from north to south in the bay for mean mercury concentrations in molluscs, the blacklip abalone and the blue mussel."

Commenting on these figures Dr Doris Airey of the CSIRO Division of Oceanography said: "I personally eat only small fish. I know small fish have less mercury in them."

Dr Airey said an education program was needed for the public and for anglers who regularly ate bay fish. An adult who ate fish which contained 0.3 ppm of mercury would be advised to eat less than 700 gram of fish a week.

"I think rather than scaremongering, people should be educated," she said. "They should know the level of mercury in fish and should be able to judge for themselves."

So far the EPA's clampdown on mercury has involved a monitoring program, the banning of any further mercury discharge licences to industry and negotiations with existing polluters to reduce their mercury discharges. Companies being asked to reduce mercury discharges include ICI Australia, Albright and Wilson and Dow Chemicals.

"I can't tell you at this stage what percentage reduction (in discharges) we are looking at," Mr Harding said. "But in general terms they will be reduced as far as practicable without imposing excessive costs on the companies concerned."



CSO: 5000/7584

NEW VICTORIAN EPA CHIEF SEEKS TOUGHER POLLUTION CONTROLS

Melbourne THE AGE in English 10 May 83 p 7

[Article by Rosslyn Beeby]

[Text]

Mr Jeffrey Wright, the new chairman of the Environment Protection Authority, wants to strengthen Victoria's pollution laws as part of a tougher stance against industrial polluters.

Mr Wright told a news conference yesterday that his first priority would be to review and redraft the Environment Protection Act to give the EPA "a host of more specific powers".

The act, introduced in 1970, was outmoded, introspective and inadequate, he said. "Certainly, the definition of pollution which appears in the act is inadequate. Before it can be proved that an offence has been committed, it has to be shown there is an adverse effect on the environment and that it affects an existing beneficial use.

"This is an early 1980s approach which has long been abandoned in other parts of the world."

Mr Wright, formerly assistant director of the New South Wales State Pollution Control Commission, also wants to "crank up" the EPA's enforcement activities with

stiffer penalties for polluters and more frequent prosecutions.

Extended powers of prosecution would act as an effective deterrent because companies did not want to go to court over environmental issues, he said. "It does irreparable damage to their public image."

Other changes would include an internal restructuring of the EPA to accelerate enforcement work and the power to specify pollution controls during the planning stages of developments.

Mr Wright said he also wanted to see penalties for pollution increased from the present \$10,000 maximum to a figure as high as \$40,000.

Although anxious to dispel the myth that the EPA was a "toothless tiger", Mr Wright said he did not want industry to view the authority as obstructive and arrogant.

"We don't have to come across as a bureaucracy, stifling industrial progress in Victoria," he said. "We will be co-operative when people are willing to co-operate, but take a hard line when they're not."

CHEMICALS USED IN GOLD MINING SEEN AS HEALTH THREAT

Melbourne THE AGE in English 16 May 83 p 3

[Article by Roy Eccleston]

[Text] Farmers are conservationists protested yesterday against plans by the mining company CRA to experiment with chloride and chlorine in extracting gold from an underground river near Bendigo.

About 25 protesters met outside the locked gates of the company's experimental site at Eastville, 20 kilometres south-east of Bendigo.

A spokesman for Friends of Earth, Mr John Kirby, told the protesters that the use of chlorine and chloride would threaten the safety of the area's underground water system.

Mr Kirby said chloride used by CRA would take the form of hydrochloric acid. He claimed that chlorine would react with organic matter that lay beside the riverbed such as coal to form organochlorines. These were poisons and included chloroform--a mutagen which could increase the size of human livers and kidneys.

CRA has told the Minerals and Energy Minister, Mr White, that it was testing the chemicals in New South Wales laboratories, after dropping plans to use cyanide-based chemicals. CRA has not yet applied for permission to use the new chemicals inground at its Eastville (Bendigo) site.

CRA has been experimenting with a number of chemical combinations to find a way of extracting gold, which lies on the bed of the ancient river 100 metres below the sheep pastures around Eastville.

The chemicals would be injected by bore into the base of the water table, where they would dissolve gold. The solution would be pumped to the surface through another bore where it would be broken down and gold extracted. The table is 40 metres below the surface, and 60 metres deep.

The State Government refused last year to allow CRA to go ahead with experiments with cyanide-based chemicals, and commissioned an independent report on the company's proposal.

CRA dropped its plans before the Government made a decision.

The main fear of farmers and conservationists is that some of the chemical solutions might go into the huge water table which stretches from Ballarat to areas of southern New South Wales.

The water around Eastville is drinkable, according to World Health Organisation standards, and local farmers draw from it as does a local school which has a bore less than two kilometres from the CRA site.

Mr Kirby told the group that in the United States "solution mining" was not permitted in areas where there was drinkable water, or where water was not confined. The water table beneath Eastville is not confined, because it did not have a clay layer on top of it to prevent seepage, he said.

CRA's special projects manager, Mr Marshall Baillieu, said yesterday that no chemicals had been injected into the bores since the middle of last year. Since then, the company had been testing the flow of the water with dyes.

CRA estimated the water flowed about three metres a year, despite a Soil Conservation Authority estimate of 80 metres a year.

Because of the slow water movement, CRA believed it could control the chemicals. In one experiment 8000 litres of dye had been injected and all had been recovered. Mr Baillieu showed protesters over the site.

He said CRA had not yet extracted any gold by the use of chemicals, although some gold had been found in rock forced to the surface by water pumps.

But there was machinery on site that could separate the gold from whatever chemical solution was used to extract it. He said the equipment had not been used.

CSO: 5000/7584

BRIEFS

OIL SPILL FINE--A tugboat company was fined \$12,000 and a captain \$500 yesterday for causing oil pollution in the Parramatta River. The Minister for Planning and Environment, Mr Bedford, said that the fine was the highest so far recorded for a single offence under the Clean Waters Act. In the Land and Environment Court Justice Cripps said a tugboat owned by Harbour Lighterage Pty Ltd was towing a barge containing oil on August 18, 1982. Just before rounding Archer Point the tug touched bottom, causing the barge to swing to port and become grounded on a concrete block. It discharged 22 tonnes of heavy oil. Justice Cripps said no charge of negligence had been made against Captain Douglas Eric Lawrence, but it was fairly clear he had made an error of judgment in failing to allow for the effects of the ebb tide when rounding the point. Justice Cripps said the spillage affected about 10 kilometres of the river, destroyed a considerable amount of marine life, disrupted bird life and caused the destruction of a large number of mangrove trees. The judge said the company had a good safety record and had never before been responsible for an oil spill. Justice Cripps allowed the company one month to pay the fine and costs of \$1,600 and Captain Lawrence two months to pay his fine. About four-thousand litres of petrol spilled into drains leading to the Parramatta River yesterday when a 30,000-litre tanker was involved in a collision in Rydalmere. [Text] [Sydney THE SYDNEY MORNING HERALD in English 10 May 83 p 9]

PARK PLAN--The North Stradbroke Island land use study recommends that large sections be set aside for national park use and that urban development be minimal. The report, prepared by private consultants, Cameron McNamara, will be discussed today by cabinet which is expected to make the findings public before making a final decision. The investigation into the Moreton Bay island's use was ordered last year when cabinet decided in principle that there should be a bridge linking Stradbroke to the mainland via Russell Island. But ministers decided that before expressions of interest could be called from developers interested in building the bridge, there had to be a study of the island's future use. When this was completed by Cameron McNamara and accepted by the government, the guidelines could be issued. Government sources said last night the report was not controversial and they felt it would be accepted publicly because of the vast spaces proposed for national parks. The sources said that the report recommended "very limited urban development." [Text] [Brisbane THE COURIER-MAIL in English 10 May 83 p 3]

CSO: 5000/7584

MEASURES NEEDED TO OVERCOME POLLUTION

Kuala Lumpur NATIONAL ECHO in English 10 Jun 83 p 3

[Text]

KUALA LUMPUR, Thurs. — Dangers of air pollution in the country has become more serious and widespread with the increase in industries including those in the petrochemical fields since the beginning of the 80's.

Acting Minister of Science, Technology and Environment Datuk Dr. Neo Yee Fan said appropriate measures must be taken immediately to prevent the problem from becoming critical.

He said traces of pollution were evident in the urban areas specially in the city and Klang Valley.

Datuk Dr Neo who is also the Minister of Housing and Local Government said the

problem could be solved with the responsible attitude of every authority concerned.

Speaking at a one-day seminar on "Environmental Issues in the Federal Territory" today he said pollution in the city was in a critical state due to the rapid development, industries, the increase in vehicles, the density of the population and the squatter problem.

He said there were about 250,000 squatters in this area they indirectly contributed to the uncontrolled pollution problem.

He said that 30 per cent of the three million vehicles registered in the country were found in the city and they too contributed to the problem.

Last year the Environmental Department received 73 complaints related to air and water pollution.

Datuk Dr Neo said there should be more parks, recreational areas, the shifting of air pollution prone industries to special industrial zones and the introduction of environmental studies into the school curriculum.

Among those present at the ceremony were the Federal Territory Minister, Datuk Shahrir Abdul Samad.

The seminar was jointly organised by the Ministry of Science, Technology and Environment and the Federal Territory Ministry.

BRIEFS

POLLUTION THREATENS MALAYSIAN WATERS—Kuala Lumpur, 6 June—Malaysian territorial waters, a source of livelihood to 60,000 fishermen, are being threatened by pollution which may become critical if effective measures are not taken now, a Government director said. Department of Environment (DOE) Administrative Director Ghazali Mohamed Noor told BERNAMA news agency that the waters, which also have vast recreational and tourist potential, were being polluted from onshore and offshore sources. Onshore wastes come from palm oil mills, rubber factories, residential areas and hotels. Offshore pollutants come from oil tanker spills and oil discharges from ships. DOE records show that 15 of 47 palm oil mills which infringed on the regulations in 1981 faced court trials.—NAB/AFP [Text] [Rangoon THE WORKING PEOPLE'S DAILY in English 7 Jun 83 p 5.

CSO: 5000/4337

HEAVY FINES URGED FOR POLLUTORS

Auckland THE NEW ZEALAND HERALD in English 18 May 83 p 3

[Text]

NZPA Wellington

Substantial fines for chemical pollution, and legislation that gives "real backing" to the Commission for the Environment, were called for yesterday by the Minister for the Environment, Dr Shearer.

"Until we start talking about very large amounts (in fines) we are simply playing with the problem," he said in a speech to the Catchment Authorities conference.

"We must give real force to the 'polluter pays' principle by hitting offending companies and corporations where it hurts."

Influence

Dr Shearer said chemical spillages in Taranaki and the Whero canal collapse had focused attention on the way in which the commission made its recommendations and the way in which they were sometimes ignored.

He suggested there should be early notification of projects which might require some form of environmental evaluation.

"I take the view that this needs to be done before the water right procedures are initiated," he said. "This, in fact, is the answer to those who say the commission should have 'teeth'."

"By putting the commission in a position where it can make public recommendations before decisions are taken we are able to give it a profound influence on the outcome."

Dr Shearer's call for increased penalties comes less than a month after the Government blocked an Opposition move in Parliament to raise pollution penalties from the present \$20,000 to \$100,000, with fines for continuing offences costing \$500 a day instead of \$100 a day.

Dr Shearer said then that the move would not solve anything and that the problem with the existing legislation was not the amount of the fines, but the diffi-

culty in securing a prosecution.

He said yesterday that the problems in Taranaki "have underlined the need for tighter controls and increased penalties to reduce the incidence of pollution, not only from the Taranaki projects but from all major industry in New Zealand."

The Taranaki Catchment Commission estimated that it was dealing with one illegal discharge a week.

Review

Speaking on the need for new legislation backing the Commission for the Environment, Dr Shearer said a team named by the commissioner would soon review a selected number of environmental impact reports and audits to determine whether the commission's activities have fully complied with the procedures.

The report, which he intended to make public, identified 13 major issues on which all agencies concerned with the environment would need to focus.

CSO: 5000/4338

PHILIPPINES

DEFORESTATION REACHES ALARMING LEVELS

Citizen Cooperation Needed

Manila PHILIPPINES DAILY EXPRESS in English 23 May 83 pp 1, 6

[Article by Jones K. Feliciano]

[Excerpt] Los Banos, Laguna--The Philippines loses an estimated six hectares of what is still left of its forested areas every hour of the day.

Bases of such computation are results of a latest survey conducted by the Bureau of Forest Development which found that from 30,000 to 50,000 hectares of the nation's forest cover disappear annually.

Such a loss is despite successful government efforts at arresting forest denudation. The turning point was achieved in 1978 when the denudation rate was brought down to 60,000 has annually from the previous high of 170,000 has.

Government reforestation efforts are spearheaded by BFD which implements a nationwide crash program. However, the bureau admits that the forest destruction problem cannot be solved by the government alone. It said cooperation of every citizen is needed.

Bureau records show that in 1979 (latest available), 62,196 has of forest land were destroyed despite the reforestation program.

"Kaingin" or slash-and-burn agriculture was held responsible for the denudation of 32,916 has that year, followed by forest fires which razed another 18,135 has. Illegal logging accounted for 8,040 has and the remaining 3,104 has has ascribed to natural calamities, like typhoons.

Worst forest destruction in 1979 occurred in Northern Mindanao which lost 6,596 has, with Central Mindanao and Southern Mindanao absorbing respective losses of 6,487 and 5,958 has, the bureau said.

Central Luzon was listed by the bureau as the only region of the country in 1979 with the least area of forest denudation, only 3,303 has.

BFD Director's Report

Manila PHILIPPINES DAILY EXPRESS in English 24 May 83 p 7

[Text] The Bureau of Forest Development said yesterday that the rate of forest damage was reduced last year from six hectares per hour in 1978 to 1981 to only two hectares per hour.

Director Edmundo Cortez, of the BFD, said that although the rate of forest destruction was reduced "considerably," there is still much to be done to prevent further destruction of remaining forests.

The rate of forest damage was lowered from an average of 32,000 hectares annually in 1978 to 1981 to at least 17,000 hectares last year, Cortez said.

Not all of the two hectares are lost, he said, because of the growing practice of selective logging. Selective logging is the forestry approach whereby only the mature, over mature and defective trees are cut and where sufficient healthy residuals (smaller trees) are left to grow for the next harvest.

Cortez said the present rate of forest damage in the Philippines is comparatively lower than that of Indonesia and Thailand.

Of the 17-million-hectare forest lands, 10.8 million hectares are still covered with timber while the rest have no commercial timber but are being used for other purposes—such as for pasture, large scale agro-forestry cultivation—and the rest are occupied by marshes and small waterways, he explained.

Only about 1.6 million hectares of denuded forest lands need immediate reforestation, he said. These areas are either kaingin clearings or inadequately-stocked residual forest while the rest are being reforested.

Within the 10.8 million hectares forest lands, 9.08 million are productive with virgin forests of 2.2 million hectares or about 24 percent, he said.

The country has 6.9 million hectares of commercial forests mainly located in public lands. Timber stands are estimated at 1.35 billion cubic meters consisting of six major types of timber forests, Cortez said.

There are 7.7 million hectares of forests land under commercial logging, of which 14.9 million cubic meters can be cut annually. However, actual cut has averaged 8.2 million cubic meters for the last 10 years, he said.

CSO: 5000/4336

SOIL EROSION, FLOODS, TOP ENVIRONMENTAL PROBLEMS

Cebu City VISAYAN HERALD. in English 23 May 83 p 6

[Article by Feliciano H. Magno]

[Text] Continued forest destruction has made soil erosion and floods the most serious environmental problems of the country today.

Exercise of the needed political will, honest and efficient implementation of government conservation measures and involvement of all Filipinos in natural resources protection are the chief means of reversing the tragic situation.

Such an action is prescribed by the Philippine Environment Report which assesses present state of nation's physical environment and details the national environmental plan for the 1983-1992 decade.

The Report minces no words in stating that the country's forest ecosystem is "seriously unbalanced" with soil erosion and destructive floods as the most visible symptoms.

Continued disappearance of the nation's forest cover means loss of valuable top-soil indispensable to successful agriculture, the Report said.

Indiscriminate and illegal logging is underscored by the rising national toll in human lives and economic loss caused by floods which now hit all regions of the country, it adds.

Forest denudation has also resulted in altered "windpaths, temperature patterns of rainfall and the hydrolic regimen of the microclimate," the Report points out.

It laments that the average Filipino is yet to fully realize the kind of damage inflicted on his socio-economic well being by the continued destruction of the forests.

The Report cites findings of experts, particularly that the United Nations Food and Agriculture Organization and the UN Development Program, that Philippine forests are "disappearing in excessive quantities."

One of the UN studies found that at their present rate of over-exploitation, all of the nation's virgin forests of commercial value will be wiped out by 1990 or just seven years from today.

The Report states: "The idea that the Philippines would have to rely on man-made forests early in the next century has not yet struck the minds of most Filipinos. Even more remote in the national consciousness is the possibility that in the not too distant future, Filipinos may have to start importing wood, a product which the nation has been exporting for decades. Timber has been one of the five major sources of foreign exchange for our country."

Actual Philippine forest area in 1968 was measured at 16.08 million hectares or 53.6 percent of the country's total land area. By 1977, the Report says that such a forest cover had dwindled to 13.07 million has, indicating a loss of 3.01 million has in just one decade.

Commercial forest area in 1968 spanned 8.85 million has and shrunk to 6.53 million has by 1980, showing a loss of 2.32 million has, or an average decrease of 0.19 million has annually, the Report details.

It recalls that the Philippine forest cover was once described "as one of the most diversified in Southeast Asia," home to a great variety of tropical broad-leafed hardwoods.

The Report is not all gloom. It points to a bright side to the country's ecology situation. This is the accelerated government effort to arrest forest denudation started in earnest in 1978.

That year marked a turning point in the campaign to rehabilitate the forests. Rate of destruction was brought down to 62,000 has annually, from 170,000 has in previous years.

However, the Report emphasizes that greater efforts are needed to narrow the gap between destruction and reforestation and this is where exercise of the correct political will counts most.

That such a political will is beginning to be exercised is demonstrated by imposition of a total ban on log exports, enactment of laws to widen forest protection measures and the launching of a national tree-planting campaign requiring participation of all citizens, the Report notes.

Illegal loggers, irresponsible licensed timber companies and the slash-and-burn farmers or "kaingeros" are identified by the Report as the parties responsible for the denudation of the nation's forest cover.

It commends the government for becoming increasingly strict in its efforts to stop activities of the illegal and irresponsible loggers and for an enlightened attitude toward the "kaingeros" who are now enlisted as partners in forest conservation.

The report adds that the new government policy towards the "kaingeros" is acknowledgement that these landless farming folk represent a centuries-old socio-economic issue in the countryside rather than a mere legal matter.--
DEPTHnews

FORTY RIVERS NATIONWIDE 'DEAD' DUE TO POLLUTION

Cebu City THE VISAYAN HERALD in English 23 May 83 p 5

[Text] Forty rivers in the Philippines are already "dead" due to pollution resulting from domestic sewage, industrial wastes, agricultural wastes, and community refuse. This was disclosed recently by the National Environmental Protection Council (NEPC) under the Ministry of Human Settlements.

The remaining surface water resources of the country consisting of 419 principal rivers, 2 major river basins, 6 major and 52 minor lakes and vast wetlands are deteriorating progressively in the upper reaches and the increasing population growth and rapid industrialization, the NEPC said.

Pasig river, for example, carries some 55 percent of its total organic load. This comes from domestic sewage including refuse. Out of 313 industrial firms along the banks of the Pasig-San Juan-Marikina River Systems, 138 pollute the river in varying degrees.

Pollution in the Pasig is further aggravated by oil spills coming from about 300 gasoline stations, several oil depots and farm barges, tankers and boats docking in the area. As a result, several breeds of fishes have been killed, and the water has become unfit for bathing, washing, and other domestic uses.

The Tinajeros-Tullajan River system in Malabon, the NEPC said, is the most polluted river system in the country today, receiving various types of solid and liquid waste from about 20 firms along their banks.

Other rivers affected by industrial wastes and poor sewage disposal in Metro Manila are the Paranaque, Zafote, Malabon, Nabotas, and Maypajo rivers. Practically all rivers in other highly urbanized areas such as Cebu, Iloilo, Davao and Baguio are similarly polluted in varying degrees, the NEPC said.

The physical and chemical characteristics of water in Angat, Apo and Bicti rivers and La Mesa Dam also show that the water from these rivers is generally turbid and contains large amounts of suspended solids. This is due to the illegal logging and shifting cultivation (kaingin) of people at the water sources. In addition, 40 sugar mills and 15 alcohol distilleries continue to destroy 19 rivers and other bodies of water in the country.

Some of these are: Balagtas river in Bulacan; Palico river in Batangas; Jalaur and Uli-An rivers in Iloilo; Alingon river in Capiz; Minluan Manapla Upit, Salamanca and Ponteverde rivers in Negros Occidental; and Panamangan river in Negros Occidental.

CSO: 5000/4336

MOLASSES POLLUTING VISAYAN RIVERS

Manila BULLETIN TODAY in English 21 May 83 pp 1, 15

[Text] Molasses spilling from sugar centrals in Western Visayas are polluting bodies of water in the region, the National Pollution Control Commission said yesterday.

Ret Brig Gen Guillermo Pecache, NPCC chairman, said the molasses overflow from their storage facilities into the water bodies in the vicinity of the sugar centrals.

Pecache met yesterday with 21 representatives from 16 sugar centrals in the region to find ways to prevent the problem.

The pollution problem was traced to the failure of molasses traders to withdraw regularly their shares of the sugar products from the storage plants.

The traders apparently left the molasses since their market price was relatively low.

During the meeting, it was proposed that of clay or plastic-lined pits be used as emergency storage facilities when the market price of molasses is down and there is a glut on the commodity.

Pecache said he will talk with Philippine Sugar Commission (Philsucom) officials to study whether molasses traders will be required to get licenses and provide adequate storage facilities.

He also proposed that each sugar mill be required to submit data on molasses production, capacities of present storage tanks, problems in storage, and emergency measures in case of spillage.

The Philsucom, it was pointed out, may also provide a depot for additional molasses bulks depot in the region.

CSO: 5000/4336

GOVERNMENT CONSIDERING TOUGHER LAWS ON TOXIC WASTE

Singapore THE STRAITS TIMES in English 3 Jun 83 p 16

[Text]

INCIDENTS of toxic chemical waste found dumped near reservoirs have prompted the government to consider firm measures to try and stop the problem.

Plans in the pipeline include:

HEAVIER penalties against those found guilty of illegal dumping;

LICENSING of private companies which collect industrial wastes for disposal;

KEEPING closer track of the movement of dangerous chemicals within Singapore, and

ENCOURAGING more companies to set up chemical treatment plants to either recycle or neutralise chemical waste.

These proposals are being studied by the Environment Ministry, the Economic Development Board and other government bodies.

The EDB is collecting data on the chemicals used by printed circuit board (PCB) manufacturers to study the feasibility of getting more

companies to invest in treatment plants for waste chemicals.

The production of PCBs results in a highly toxic chemical waste — mostly ferric chloride and ammonium sulphate — which cannot be easily treated.

None of the PCB manufacturers in Singapore can treat their chemical waste which exceeds 14,000 litres in a month.

Problem

There are one or two companies which can treat ferric chloride, but cannot handle all that is produced.

Some manufacturers have to ship the chemical waste back to suppliers in Europe.

The EDB is now looking into the possibility of encouraging more companies to set up waste treatment plants. But one problem is that the different PCB manufacturers get chemicals from different suppliers, each with

its own characteristics and needing a different treatment process.

The Environment Ministry is looking into having stronger deterrents. Under the Water Pollution and Drainage Act (1975), there is a fine of \$5,000 for the first offence and \$10,000 for subsequent offences.

Asked if heavier penalties would include jail sentences, a ministry spokesman said: "Let's not speculate."

The ministry is also considering licensing private waste collectors so that their activities can be more easily controlled.

Moreover, the environment ministry has always tried to keep track of who uses which chemicals, how they are disposed of and so on.

Such surveillance had proved difficult in the past, especially when chemicals react to form new compounds when they are used, but the ministry might be stepping up efforts here as well. — ST.

CSO: 5000/4335

ECOLOGICAL CONDITIONS, NEW EXPERIMENT DISCUSSED

Slovakia's Water Polluted

Bratislava PRAVDA in Slovak 17 May 83 pp 1, 2

[Text] The Slovak Inspectorate of Water Resources recorded 104 cases of accidental water pollution last year. The unenviable lead of industry and agriculture.

Bratislava. (From our editor, Anna Zimaniova.) Not so long ago, water quality was not in the forefront of attention the way it is today. We had enough water (at least to supply the consumers' needs), and it can be said that the water was of good quality. Whether potable water or water for industry. Except for a few cases when sources of potable water became polluted by the seepage of petroleum products or other substances into the subsoil, when it was necessary to use tank trucks to supply the households with water, there was not much said about any exceptional deterioration of the quality of surface and underground waters.

This is approximately how we would be able to describe the situation fifty years ago. Only scientists and specialists in the management of water resources know about the gradual, slow but steady, deterioration of our water in some localities in Slovakia. The measures adopted by our highest party and government organs, the Water Resources Law and the many decrees stemming from it prove our awareness of the sad trend in the development of water quality, and of the need to halt this trend. How? By consistently fulfilling the obligations stemming from the management of water resources, its protection from pollution, etc. The accidental worsening of water quality in Slovakia last year is an indication that this important task is not yet being taken seriously everywhere.

(Incomplete) Damage 17 Million Korunas

Although accidents are not an indicator suitable for evaluating in general the quality of surface and underground waters, they nevertheless have a short-term or long-term effect on water quality. Excessive pollution, the quantity of pollutants in the water, whether short-term or long-term, always affects the use of water. And, last but not least, it reflects the level of care for water quality. In 1980, officials of the Slovak Inspectorate of Water Resources recorded 68 cases of accidental water pollution, but last year the number of such cases rose to 104. Petroleum products account for the largest share of such accidents (43.7), followed by mineral and organic fertilizers (13.3 percent). Among the ministries, the SSR Ministry of Industry and the SSR Ministry of Agriculture and Food held the unenviable lead in 1982. The organizations of these ministries

caused the same number of accidental water pollution incidents, 24 per ministry. At the same time it should be noted that the enterprises and plants of the SSR Ministry of Industry showed a distinct improvement during the past two years. In 1980 they had only five accidents that worsened the quality of water. That same year, agriculture already had 19 incidents on its record, and the rise in the number of incidents was due primarily to recurring accidents such as, for example, at Agrovýkrm (Agricultural Feedlot) in Velke Bierovce and elsewhere. We cannot disregard the fact that repeated accidental pollution of waters was caused also by industrial plants and enterprises; for example, the Ruňany plant of the Iron Ore Mines National Enterprise had four incidents in succession late last year, and there were recurring incidents also at the Bukoza National Enterprise, Vranov. This is indisputable proof that the elaboration of, and compliance with, effective measures intended to prevent similar situations are still somewhere in a vacuum, which is causing substantial losses to the economy and irreparable damage directly to the living environment.

According to professional estimates, last year alone the recorded incidents of accidental water pollution caused the national economy losses totaling 17 million korunas. These estimates took into account only the approximately 112 tons of fish killed, the losses resulting from the inability to use water, the costs of emergency water supply, cleanup costs, etc. Simply stated, only the losses that can be calculated. However, to these one must add the other losses resulting from destroying individual components of the living environment. Regrettably, these other losses cannot be determined always and accurately be economic computations.

Penalties for Polluters

For accidental water pollution last year, the Slovak Inspectorate of Water Resources proposed levying penalties totaling 2.3 million korunas on 36 organizations, and fines totaling 11,900 korunas on 19 individuals at these organizations. The organs for the management of water resources authorized to act on these proposals levied fines totaling 1.6 million korunas on 30 organizations and fined eight officials a total of 5,300 korunas for nonfulfillment of their duties. But as we very well know, neither payments for excessive pollution nor fines will clean up our rivers. They are (unfortunately, not always) merely one of the consequences of the negligence and irresponsibility, for which in the final outcome our society must pay. The enterprises and plants should not be neglecting and belittling their plan of measures in the case of accidental water pollution. Last year, only 47 of the accidental water polluters had such a plan in place, and only 23 of the organizations proceeded according to this plan in cleaning up the accidents. It follows also from these facts that even though water is becoming more scarce with each year, and although its temporary shortage causes unpleasant situations in the water supply of not only the households but of production as well, primarily the production enterprises and agricultural organizations still do not appreciate adequately the importance of protecting water from pollution. The latest analysis of the accidental pollution of surface and underground waters has again confirmed that the provisions of Decree of the Ministry of Forestry and Water Resources No 23/1977 Zb on the Control of Water Pollution are not being fulfilled consistently in practice. Each year the establishment of this state of affairs will not solve the situation, nor will it prevent the occurrence of additional accidents. Much more is expected of the organs entrusted with the management of water resources. Whenever the quality of water worsens, they should exercise--consistently and uncompromisingly--the authority that the aforementioned decree grants them.

Ecological Experiment Described

Prague RUDE PRAVO in Czech 18 May 83 p 4

[Article by Dusan Brabec and Michal Strida: "An Experiment for the Welfare of Man"]

[Text] When the term "ecological system of management" first appeared in 1974-1975 in one of the basic research projects of the CSAV [Czechoslovak Academy of Sciences] Institute of Countryside Ecology, it still sounded like a dream of the future. First it had to sink into the subconscious that this was a system of man's using the countryside in such a way that all the basic components and functions of the countryside are systematically managed in smooth coexistence of the present and future, for the greatest benefit of man and of society.

Under the 6th Five-Year Plan, in the period 1975-1980, it was decided to prepare and carry out experiments on territories of different types, differing in their conditions and size. These experiments were intended to test the theoretical and methodological principles of gaining organizational experience for the practical introduction of so-called ecoprograms. Organized development of the ecological system of management was to begin under the 8th Five-Year Plan (1985-1990). For the 7th Five-Year Plan an ecological program has been elaborated for the Luhacovice spa, and similar activity is being prepared in the Frydek-Mistek area in the Beskyds, also in the vicinity of the fish-farming town of Trebon, the Krivoklat area, the Sumava preserve and the Ceske Budejovice area. Grand is the elaboration of a project for ecological optimization of the East Slovakia Plain's utilization.

The ecoprogram of Rakovnik Okres is intended to be a part of this prepared period of experimentation, within which each of the elaborated projects has its own specifics. In their sum total they should provide a wider and deeper picture of the experience with promoting ecological systems of management in the test units, so as to provide the prerequisites for unfolding this work on a wide scale under the 8th Five-Year Plan. The Rakovnik experiment is intended to test the feasibility of employing ecoprograms under the conditions of an entire okres, with all components of local self-government and of the National Front cooperating with the industrial and agricultural enterprises and institutions in the okres. An important role will be played by the methodological assistance the specialists and experts of the CSAV Institute of Countryside Ecology (UKE CSAV), Charles University Faculty of Natural Sciences, and other institutes and professional centers will provide.

What has been the experience in Rakovnik so far? The idea of curbing the negative effects associated with the immense development of all branches of the national economy--extractive and manufacturing industry, large-scale farming, transportation, etc.--occurred to the collective of the State Nature Conservation attached to the okres national committee's department of culture and to the okres committee of the Czech Union of Conservationists. People began to realize that it was necessary not only to solve the present situation, but also to prepare long-range measures that would serve the further development of industry and agriculture in the okres but would simultaneously ensure an ecological system of management for the future. The elaboration of such a concept meant approaching it comprehensively and not letting it be influenced by ministry or other group interests.

Cooperation was established between the Rakovník Okres National Committee's Department of Culture and the CSAV Institute of Countryside Ecology. A briefing session was held in 1981, attended by representatives of the okres national committee, the CSOP [Czech Union of Conservationists], forestries, agricultural enterprises, the Czech Union of Foresters, industrial enterprises, national committees and the mentioned CSAV institute; and the objectives of the ecoprogram's partial stages were set. On this basis, the individual plants, organizations and okres national committee departments were requested to prepare studies that would provide a complete picture of present and planned management and would also identify potential problems and shortcomings, and the possibilities of their solution. Contributions by the territory's users were intended to provide information not only about the development of their activity and the change in their thinking, but also about the specific impact of the adopted measures to improve the living environment.

The okres national committee's council met in January 1982 and invited representatives of all the aforementioned organizations to its proceedings. A proposal was jointly adopted to provide organizational support for the Rakovník Ecoprogram. It was decided to form seven work teams, one each for agriculture, forestry, transportation, recreation, conservation, living environment and education and training in conservation. The collectives of experts were to prepare the draft of the ecological system of management. The work was coordinated by the Rakovník Okres National Committee's Department of Culture. In the autumn of 1982, the teams met at a work session to prevent possible conflicts in the problem areas. The materials prepared by the work teams were reviewed by experts of the CSAV Institute of Countryside Ecology and of Charles University Faculty of Natural Sciences. They recommended some changes and certain additional measures. The Rakovník Ecoprogram had arrived.

In late April of this year, a conference on the Rakovník Ecoprogram was held in Nový Strasec. The results of the conference were summed up in a proposal for an ecological system of management in Rakovník Okres. Jaroslav Jůzl, chairman of the okres national committee, and Helena Lengyelová, secretary of the okres party committee, spoke out in support of the proposal, which has been submitted to the okres national committee's council. It is now up to the council to ensure that the individual measures are incorporated in the plans of the okres national committee, of the National Front okres committee's components, and of all production enterprises in the okres.

The new model requires novel, nontraditional solutions, and a businesslike approach by all the interested parties. It is obvious that in some situations the Rakovník Ecoprogram's realization will not be able to dispense with repressive measures that should have primarily an educational role in setting up this process. It has already been demonstrated that this would be unavoidable. Responsible representatives of none of the partners, the industrial and agricultural enterprises that will have the greatest role in promoting the project and in its practical implementation, were present at the Nový Strasec conference. At the cultural center in Nový Strasec it was said that potential participants from the industrial and agricultural spheres were reluctant to promise in advance that they would attend, and that they were simply adopting a wait and see attitude.

In their speeches, however, the representatives of the okres party committee and okres national committee made it unambiguously clear that the organs of state administration would not let anyone in the Rakovnik area violate or ignore the adopted principles of the economic program. All the conferees in Novy Strasec were aware that realization of such a demanding project as the ecological system of management in an entire okres will be not only a manifestation of good will, but also of attitude toward solving the far broader problems of countryside ecology. Specifically the Rakovnik experiment is the most demanding test of the feasibility of solving environmental protection in a comprehensive manner.

1014

CSO: 5000/3015

FOREST DEPARTMENT OFFICIAL NOTES ENVIRONMENTAL PROBLEMS

Roseau THE NEW CHRONICLE in English 4 Jun 83 pp 6-7

[Excerpts] Tomorrow Dominicans will be counting their blessings reflecting on nature's beautiful gifts and contemplating on how to preserve our up-till-now relatively unspoilt environment. June 5th—World Environment Day was instituted to do just that. A DBS panel discussion confrontation on Sunday and radio programmes before and after that marks Dominica's observance of WED.

What is the environment? Local environmentalist attached to the Forestry Division, George Butler says it's "anything that man interacts with, be it social, physical or natural."

As expected, this interaction has given rise to several crisis especially in the past decade. Notable was the serious air pollution episodes in London and New York between 1952 and 1966.

In Dominica there has been no crisis of such magnitude. But according to a Forest Department Official we do have problems. There is a certain degree of water pollution, soil erosion, waste disposal problems and in the social environment, unemployment, malnutrition and disease prevention and control problems. The official said one river near Roseau is now being seriously polluted by industrial wastes. He also mentioned large fish kills by chemicals in St Joseph and Marigot in recent years. But Dominicans have taken a few steps towards protecting and preserving the environment.

Government has passed a number of laws to achieve this objective. These include: The Forest and Wildlife Act, the National Parks and Protected Areas Act, the Beach Control Act, the Pesticide Control Act and the now being revised Town and Country Planning Act.

Also the 2-year-old Dominica Conservation Association, with Gairy Aird as President, is participating in the preservation of our natural heritage. The Association is assisting the Forestry and Wildlife Division whose burden since 1949 has been the protection of our environment. In addition, Dominicans have attended at least two conferences organised by the United Nations Environment Programme in recent years. However, this may not be enough.

CSO: 5000/7586

SEAGA STRESSES LOSS OF TOPSOIL IN ASSESSING ENVIRONMENT

Kingston THE DAILY GLEANER in English 4 Jun 83 p 1

[Text] Jamaica is losing 40 to 50 tons of topsoil each year, according to Prime Minister, the Rt Hon Edward Seaga, who also says that one-sixteenth of the country's land has been ravaged.

Speaking at a meeting yesterday with the Executive Director of the United Nations Environment Programme, Dr. Mostafa Tolba, at Jamaica House, Prime Minister Seaga said the land had been ravaged by improper land clearing and burning, among other things, and this could result in a crisis situation for Agriculture.

Mr. Seaga explained that, in many instances, topsoil had washed down to the flat lands, clogging river mouths. "We are going through the worst drought in the last 50 years, hence focus on the environment is a timely exercise," he told Dr. Tolba. He cited the watershed management programme which the country had embarked on, observing that the assistance of UNEP in this area would be of tremendous benefit.

The Prime Minister spoke of the problem being experienced with the disposal of ~~red mud~~ waste from bauxite mining and expressed optimism that with the application of the technology developed by Canada some use could be found for the waste product.

Mr. Seaga also said there was a further problem being experienced by Jamaica in the form of peat extraction. He said that the country had a quantity of peat which could be used to generate some 30 percent of the country's electricity needs.

However, the Prime Minister said, since there was the possibility of environmental problems arising from the

extraction of peat, comprehensive studies were being done and these would be completed by year-end.

The Prime Minister expressed pride in the environment management and research work being done in Jamaica. "It shows the rest of the world that small countries with environment problems can tackle them effectively," he said.

Dr. Tolba praised the commitment of the Prime Minister to environmental issues and said that this was one of the main reasons for Jamaica being chosen as the location from which the World Environment Day message was being delivered to the rest of the world.

He pledged support to assist with securing financing for Jamaica's watershed management plan, describing the country as one whose leadership was committed to environmentally sound development.

Developing countries, he said, should follow Jamaica's example, looking at their resources in a critical manner in order to make decisions which would not affect the environment in later years.

ENVIRONMENTAL CONTAMINATION IN COUNTRY DESCRIBED

Managua LA PRENSA in Spanish 13 May 83 pp 1, 14

[Interview with Dr Jaime Incer; date and place not given]

[Text] Problems stemming from environmental pollution and its resulting harm to natural and human resources are a worldwide concern. In our country, the greatest damage is reported by Managua Lake.

Pollution means the alteration of water, air and food by human activities. Waterways are contaminated by domestic detergents, agricultural insecticides and chemical products dumped by industry.

The dangers to mankind posed by the different types of pollution require preventive measures such as water treatment and the handling of industrial smoke.

As World Day of the Environment approaches, LA PRENSA talked with Dr Jaime Incer, who stated that in Nicaragua, the most dramatic case of pollution is Managua Lake.

[Question] Dr Incer, what are the main centers of pollution here in Nicaragua, in your opinion?

[Answer] Managua Lake is the biggest pollution problem we have in terms of size and magnitude. However, efforts are already underway in the form of the Lake Salvation Workshop held in past months.

Pollution of the lake is due to the dumping of sewage and industrial detergents, in addition to soil brought by channels.

Second, I would consider that the indiscriminate use of insecticides, especially in cotton-growing zones, has been poisoning the air for some 30 years.

This has not only hurt the fauna in the zone, but has also contaminated the soil, and in rural areas where wells are being drilled for the people, there is a danger of affecting inhabitants.

Another type of contamination is due to agroindustrial waste, for example, coffee pulp in the Matagalpa and Jinotega areas.

Rice hulls also contribute to contamination in the region of Granada Lake, where waste from the Trillo El Diamante silos go. Another hotbed of pollution is the tanneries.

We also have waste from industries, which may contain arsenic and cyanide. When such waste gets into the rivers, it harms fauna and the people used to bathing in the rivers and even drinking water from them.

In fifth place, we might consider solid waste (garbage). Nearly all the people are used to throwing garbage along the highways and roads, especially in rural areas. Here in Managua, garbage in vacant lots, with the bad smell and the plastic bags that are not biodegradable, is a serious pollution problem.

Dr Incer added that the grey waters and sewage entering the rivers are other elements contributing to pollution.

With respect to atmospheric pollution, the air is contaminated as a result of the burning of tires and pasture, which is very common.

In addition, exhaust from automobiles and motorcycles pollutes the atmosphere.

[Question] Dr Incer, here in Managua, what would be the second greatest concentration of pollution?

[Answer] With its unpaved streets, especially in the eastern districts, Managua has another form of contamination in the large quantity of dust raised.

In addition to this is the dust from the dry land in summer in the Masaya area and other nearby growing areas.

[Question] What is the degree of pollution of our capital compared with other cities in Central America?

[Answer] Managua has the advantage of being on a plain and it is a well-ventilated city. It is the best situated in Central America. San Jose, the capital of Costa Rica, has major pollution problems because it is situated in a kind of bowl.

Our capital is in a clear area. We need sidewalks and paved streets in order to reduce the dust problem.

[Question] What measures could be taken in order to reduce the pollution problem?

[Answer] We need environmental legislation for conservation of the soil, air and water and control regulating both urban and rural activities.

[Question] In what way is environmental pollution manifested in the population?

[Answer] There are cases of respiratory, digestive diseases and other effects as yet undetermined. The infant mortality rate is apparently high in rural cotton-growing areas.

All the cases I know of are in other countries such as Guatemala. In Nicaragua, we have the case of fish from Managua Lake. Many persons do not eat the fish for fear of contamination from excrement and other sources. However, what such fish might have and that is a real danger is mercury in the tissue.

[Question] Is there any special recommendation on the problem?

[Answer] I would only like to emphasize the importance of environmental legislation and control over sources of pollution, as well as research into the effects on human health.

11,464

CSO: 5000/2036

BRIEFS

WATER CONSERVATION NECESSARY—The level of the Asososca Lagoon, the main source of drinking water for Managua, has dropped rapidly in recent days, mainly due to the lack of rainfall and the irrational use of water used for gardens and lawns, Otoniel Arguello, director of the Nicaraguan Water and Sewage Institute (INAA), said yesterday. Last week, he added, the level dropped to 34.82 meters, although the critical point is 33.33, which was raised beginning in 1980 by means of various campaigns undertaken by the Revolutionary Government. "Never in the month of May has the level dropped so far. Consequently, we are not only awaiting rainfall, but we also need the help of all the people," Arguello said. He reported that a campaign will immediately be undertaken with the 19 de Julio Sandinist Youth and the Association of Sandinist Children in order to promote the proper use of water in schools and parks, places where that vital liquid is being wasted. Asososca has gone down 82 cm this year. If it does not rain in the days ahead and if the waste continues, some 6 million gallons will have to be pumped, 16 percent more than in May 1982. This could meet the needs of 136,000 persons. Arguello said that in Managua, there are water supply problems because the three zones of the capital have different levels requiring different levels of pressure. [Text] [Managua BARRICADA in Spanish 11 May 83 p 1] 11,464

CSO: 5000/2036

ST VINCENT AND THE GRENADINES

BRIEFS

ENVIRONMENTAL COORDINATION BODY--Kingstown, St. Vincent, Monday, (CANA)--The government has appointed an environment improvement committee to co-ordinate all environmental matters in St. Vincent and the Grenadines, it was officially announced here. Prime Minister Milton Cato, in a message to mark World Environment Day yesterday, said the committee, headed by retired chief agricultural officer, Dr. Earl Kirby, will also formulate strategies to solve specific environmental problems. In his message, Mr. Cato said government would place greater emphasis on environmental planning and management. Mr. Cato said the country's physical planning and developmental board and the central planning unit were trying to ensure that developmental activities carried out in the state did not seriously damage the environment. He said that the state's Public Health Department had been extending its services to ensure that there was improvement in the area of environmental sanitation. He also reported that the Central Water and Sewerage Authority was continuing its programme of improvement in water quality control and greater distribution of pipe-borne water on a daily basis to villages throughout the state. He said too that the Ministry of Agriculture was encouraging farmers to use good conservation farming methods, while at the same time protecting the country's forests and water holding areas. [Text] [Bridgetown BARBADOS ADVOCATE in English 7 Jun 83 p 3]

CSO: 5000/7585

BRIEFS

YARQON CONTAMINATED — Last Friday, poisoning of the Yarkon River was discerned, and thousands of dead fish were floating on the water and concentrating on the banks. An odor of sewage was perceived on the Yarkon and in its vicinity. A representative of the Environmental Protection Authority said that the poisoning was caused because of the dumping of sewage into the Yarkon by the Cities of Dan Sewage Union, and that the authority would be unable to bring to court a body as large as the Cities of Dan Union, in spite of the fact that it was identified as the body responsible for the poisoning. Yesterday, the head of the Cities of Dan Sewage Union and deputy mayor of Tel Aviv, Yitzhak Keipi, completely denied this claim. He said: "Let the Environmental Protection Authority deal with nature, and not the Yarkon". He said that since the poisoning was discovered last Friday, tests have been made and samples taken to discover the cause of the poisoning. Keipi added that as of now, no cause of the poisoning had been discovered. He also added that the loss of fish was "not great", there is no longer the foul odor of sewage, and that for the past 2 days water has been flushed into the Yarkon in order to overcome the toxicity. [Text] [Tel Aviv 'AL HANISHBAR in Hebrew 2 May 83 p 8] 7075

CSO: 5000/4521

COUNTRY'S ENVIRONMENTAL IMPERATIVES DISCUSSED

Karachi DAWN in English 5 Jun 83 p 13

[Editorial: "Environmental Imperatives"]

[Text]

ELEVEN years ago today, 113 nations gathered in Stockholm for the United Nations Conference on the Human Environment and adopted the principle of "only one earth". Since then, this day has been observed every year as the World Environment Day, providing an occasion for taking stock of the successes and failures of the Stockholm Plan of Action. A major success has been the growing awareness of the issues and challenges involved. We know and hear a lot about acid rain, pollution caused by burning of fossil fuels, deforestation, desertification, oil-at-sea, the ozone layer, industrial wastes and the need for clean air to breathe and clean water to drink. Eleven years ago, there were only ten ministries of environment. Now about 110 countries have such ministries or departments to deal with the environmental problems. In Pakistan, we have the Environmental and Urban Affairs Division. But the problems of environmental control are more talked about than tackled in scientific ways — at least in the developing countries. In a recent international survey, Pakistan was reported to be ranking 105th on the physical quality of life index. The crucial indicator of

the provision of potable water projects a very dismal picture. Paucity of such basic facilities as education, health and communications also contributes to environmental deterioration. The growing urban population, reflecting rural stagnation rather than industrial progress, has led to a proliferation of slums that lack water, electricity and sewerage facilities. Karachi is increasingly becoming a nightmarish example of civic disorder, breeding crime and corruption.

Hence, the original commitment to increase knowledge of the environment and to protect and improve its quality deserves to be emphasised with a new vigour and understanding. In both international and local contexts, we have recently had some alarming reminders of how a lack of environmental control could adversely affect our lives. The threat that the giant oil slick in the Gulf, caused by two leaking Iranian off-shore oil-wells, poses to our marine life is only dimly realised. Pollution of the sea and rivers is a major issue in environmental debates. That the Gulf countries have not yet been able to hammer out an arrangement to cap the Iranian oil-wells which continue to spill oil in the sea is very disconcert-

ing. It is also discouraging that after an initial surge of concern, the matter has receded from the headlines, indicating a somewhat passive acceptance of a long-range threat to marine life and desalination plants along the coast even though the threat is widely recognised as very serious. Pakistan, too, should not take lightly the possibility of the oil slick floating into its coastal waters. Ecological factors, not yet fully understood and researched, may have also caused the meteorological disturbances which brought freak rains in many northern cities of Pakistan last month. Experts believe that the weather disturbances were caused by the appearance of high-intensity sun-spots, atomic research programmes in various countries and "disturbance in the set ratio of particles necessary for the layer of ozoneosphere". Such developments underline the urgency of global cooperation in dealing with environmental issues. But nearer home, on a more restricted plane, we have sufficient evidence of how deteriorating living environment can vitally affect human lives. Liaquatabad in Karachi has been a seed-bed of urban discontent. Rather late in the day, the recent eruption of sectarian strife in the area prompted the authorities to look a little deeper into the conditions of living for the vast multitude in that locality. A high-level meeting in early May reviewed the state of existing civic amenities in Liaquatabad and the Governor pointed towards congestion and deficiencies in recreational, educational and allied facilities. He noted that population density of Liaquatabad was about 540 persons per acre as against the desirable 180 per acre generally provided for in new schemes. And, most significantly, there was the paucity

of open spaces, parks and playing fields in the area. This realisation should, hopefully, lead to some tangible actions designed to improve the conditions, including civic and recreational facilities, affecting the lives of the people of Liaquatabad and similar other localities.

Since the main purpose of the World Environment Day is to highlight global interdependence in the care and use of earth's resources and to create awareness of the environmental hazards, stress is to be put on broad policy issues. We do not still have a national environment policy. Nor is there any comprehensive anti-pollution legislation. One of the major concerns of the environmentalists is to find secure and plentiful supplies of energy. Pakistan, like other developing countries, should devote serious attention to the potential impact of harnessing the energy of plants. The concept of "energy farms" for developing renewable sources of energy is now widely known. Also, in the context of deforestation and desertification, we must consider growing 'fuel crops' — fast growing trees, conventional crops or water plants. Burning of fossil fuels is a major environmental hazard, because of sulphur and nitrogen oxide emissions. But "agroforestry" and other projects will require concerted programmes — supported by effective measures for environmental protection. The imperatives are obvious. But the first task is to comprehend and identify the environmental problems. In keeping with the spirit of the occasion, let us reaffirm today our commitment to the protection and preservation of environment through well-conceived programmes which would also promote the cause of our national development.

DROUGHT HAS SERIOUS IMPACT ON FOREIGN EXCHANGE

Johannesburg THE CITIZEN in English 9 Jun 83 p 27

[Text]

HARARE. — One of the most severe droughts this country will have extremely serious implications for Zimbabwe's foreign exchange earnings, according to the country's Central Bank.

But the Reserve Bank of Zimbabwe said in its quarterly economic review that tobacco, the largest export crop, seems to have been least hit so far.

The bank said other harvests will be significantly lower this year because of the drought, with maize output halved in the 1983 crop year that started on April 1.

It predicted that maize deliveries to the grain marketing board will reach a maximum of 700 000 tons compared with 1.4-million tons in 1982.

Agricultural industry sources predicted cotton output slightly less than last year's 155 000 tons.

But because water will not be available to irrigate the winter wheat

crop, output is expected to fall by more than a quarter from 218 000 tons last year to a maximum of 140 000.

The bank said the livestock industry was also severely affected by the drought and cattle slaughtering could be expected to further delay attempts to rebuild the national herd.

Agricultural Minister Senator Denis Nouran said last week the country would spend \$57-million to help the cattle industry overcome the effects of the drought.

The Reserve Bank said the implications of the dry spell for foreign exchange earnings were "extremely serious".

Pipe-cured tobacco was Zimbabwe's chief export last year and earned almost \$200-million in foreign exchange.

Although the tobacco crop is expected to increase slightly this year, earnings are expected to fall because of a weaker world market for Zimbabwean leaf.

EFFECT OF DROUGHT ON URBANIZATION RATE NOTED

Johannesburg RAND DAILY MAIL in English 25 May 83 p 2

[Article by Lin Menge]

[Text]

THE present drought would accelerate urbanization in South Africa to a point never experienced before, Mr Louis Koch, chief director of the Eastern Cape Administration Board, said at the "Housing Challenge" conference in Pretoria yesterday.

"Those people who move to the towns because of the drought are not going to go back — only a very small percentage will return," Mr Koch said.

Unless this was taken into account, forward planning for housing could be off target.

"We do not have a squatter problem, we have an urbanisation problem," he said.

The shortage of serviced land lay at the heart of the housing problem. There was far too much red tape, he said.

"You could cut millions of rands off the cost of infrastructure if you cut the time spent in the provision of land."

Undue delays in housing development would harden attitudes and whip up emotions to the point where people did not even feel welcome in the areas to be developed.

Mr Koch said the sale of 100 000 State-owned houses did not go far enough — it should be extended to serviced vacant stands to help new homeowners. The private sector, through utility

companies, rather than local authorities and administration boards should be brought into the selling action.

He pleaded for more realistic building standards. People were being forced to break the building regulations because they could not afford to meet them. Then if their houses were broken down they were upset and suspicious and felt that the "have's" did not want them — the "have-nots" — to have anything.

Opening the three-day conference, which was organized by the National Building Research Institute of the CSIR, the Deputy-State President, Mr A L Schabensch, said South Africa's 14.9% inflation rate had tremendous implications for housing because costs could double every seven years even if the average inflation rate was only 10% a year.

Mr Schabensch said the cost of service land was 20% to 25% of the total cost of a middle income house, but this increased to 30% of the total cost of a house for the low income group.

Building researchers believed engineers would be forced to adopt an appropriate technology approach to services to cut costs, he said.

Dr D Mullins, senior planner, economic planning branch of the Department of Constitutional Development and Planning, said housing requirements for the period 1982 to 1990 stood at 2 500 000 (1 700 000 for blacks, including a 500 000 backlog, 250 000

for whites, 180 000 for coloureds and 80 000 for Asians).

Dr Mullins said that while State expenditure on defence had risen from 11.5% in 1970 to 17.3% in 1980, expenditure on housing had fallen from 2.68% to 2.1% in the same period.

Mr L van Gam, deputy director constitutional services in the Department of Co-operation and Development, said the possibility of converting "the deed of grant" system used in the homelands to a conventional land title would be investigated.

Building societies did not accept the deed of grant as adequate security and had suggested that a system similar to 99-year-leasehold be applied in the homelands.

Mr J K Matjila, of the Vaal Triangle Community Council, said Escom was to finance the servicing of 1 500 stands in Sebokeng and the erection of 1 500 houses and a 1 500-bed hostel in a R40-million development over the next seven years.

In a paper read on his behalf, Professor R Weitz, director of the Settlement Study Centre at Rehovot in Israel, urged the creation of a system of rural towns, as opposed to villages, which would provide a link between industry and agriculture, provide markets for farmers' produce and attract much-needed professional workers and entrepreneurs who would otherwise all settle in the main cities.

BRIEFS

RURAL BLACK EXODUS THREAT--Cape Town--An exodus of blacks to the cities would take place on a scale never seen before if farmers received no help in fighting the effects of the drought, the AHI congress was warned yesterday. Dr J.G. van der Horst, chairman of Old Mutual, said nobody yet realised the full implications of the drought on the economy. The service sector would cease to exist if drought-stricken farmers were unable to support it. This would bring a new kind of exodus from the plateland, and if farmers were unable to keep their labourers there would be a new trek of blacks to the cities, with all the attendant problems. "It is an emergency. We must be sure what kind of help we will give to our farmers. This is not a time for ad hoc decisions. There must be a comprehensive emergency plan," Dr Van Der Horst said. Farmers were worried about debts for fuel, fertiliser, seed, insecticide and agricultural implements. He called for: Consolidation of farmers' affairs into co-operatives; A five-year moratorium on farmers' debts; State subsidy of farmers' rents so that the farmer would pay only 4 percent of the cost, with the interest added to the capital debt under moratorium; A facility under which the co-operatives could extend new credit to farmers, with their past debts separated under a moratorium. The State should not raise the money to pay for farmer support by the creation of new money because that would be inflationary. The money should be borrowed through the capital market, he said. [Text] [Johannesburg RAND DAILY MAIL in English 26 May 83 p 12]

CSO: 5000/198

BRIEFS

ZEBRA HERDS RAID FARMS--Mbabane--Swazi farmers in the malundza area in the eastern Lowveld are facing an additional problem caused by the continuing drought. Large herds of zebra from the Ehlane Royal Game Reserve, some 20 km away, are raiding their farms at night. The zebra, normally very shy and seldom seen, are accompanied by large numbers of wild pigs when they raid the area eating and damaging the farmers' already depleted maize crops. Farmers say the animals appear so desperate for food they even approach the homesteads to get at maize stores. They are helpless to do anything about the situation as they cannot shoot the animals which are protected Royal game.--Sapa [Text] [Johannesburg THE CITIZEN in English 9 Jun 83 p 14]

POWER STATION TO CLOSE--The Edwaleni Power Station which supplies power to the whole country will close down, the Deputy Manager of Swaziland Electricity Board (SEB), Mr Robert Friede, confirmed yesterday. Mr Friede said the Edwaleni Power dam was going to cease operations for about two months between now and maybe early September when rain is expected to fall and help raise the water level of the Usutshwana River on which the dam is situated. He said the Edwaleni dam known as Emkhinkomo was to cease storing any water from the Usutshwana River because farmers at the bottom of the main river, Usuthu, had complained that they were not getting enough amount of water for their farming purposes. He explained that usually when rainfall is plentiful, the farmers below the dam area were never affected by the use of the dam by SEB, but now that the drought has hit the rivers' water levels beyond any expectations, they were getting more affected every day. "Before we used to share the water in that on the weekends, SEB would let the dam water get through to flow down into the main Usuthu raising its levels for the farmers to be able to draw water in their canals for farming. But now if we close the dam for operations they do not get any water," Mr Friede said. Mr Friede pointed out that the demand for electricity in the country was getting very high and Edwaleni was finding it difficult to carry the load. "It was inevitable then that the 70 percent dependence on the Electricity Supply Commission of South Africa (ESCOM) be raised to about 85 percent at a cost of about E1 million a month," he said. He confirmed that SEB was spending more millions now than ever experienced before due to the drought and the Luphohlo project. "We have had to abandon all our expansion programmes including the Third Feeder line for Big Bend worth about E700 000 as well as buying a computer for the headquarters. But, well, if you plan to throw a party and your roof falls, you abandon that party and attend to the roof," Mr Friede said. [Text] [Mbabane THE SWAZI OBSERVER in English 1 Jun 83 p 1]

WPF DROUGHT AID--Hundreds of villagers turned up in the chief's residence at Malindza in the drought-stricken Lubombo district this week to register for food aid. The food has been donated to the government by the World Food Programme for drought-stricken families. The Ministry of Agriculture is working in liaison with the chiefs and other village authorities to distribute the food to the deserving families. The Malindza community started receiving their share of the food this week. The first rations were two bags of mealies and two large tins of dried beans per family. More food consignments are still to be delivered at Malindza. [Text] [Mbabane THE TIMES OF SWAZILAND in English 26 May 83 p 1]

CSO: 5000/198

BRIEFS

BARTER BRINGS DROUGHT RELIEF--Harare--Hard-pressed Zimbabwean cattle and maize farmers will get some relief after a successful barter deal involving about R3,3 million worth of urea fertiliser from Romania. The deal is a trade-exchange of local low-carbon ferro-chrome for Romanian urea. According to agricultural sources the first consignment of about 25 000 tons of the fertiliser is expected to arrive in September. Urea is an essential component widely used, together with molasses, (at present in very short supply), in cattle and livestock feeds. It is also used as a nitrogenous fertiliser for maize and other crops instead of ammonium nitrate. It is badly needed in the present drought conditions where grazing is poor or even non-existent in many areas in the country.--Sapa [Text] [Johannesburg THE CITIZEN in English 18 Jun 83 p 12]

CATTLE DEATH TOLL--Harare, Thursday--More than 100,000 cattle have probably died in drought-hit Zimbabwe so far this year and the worst is yet to come, the chairman of the country's cattle producers' association said yesterday. Mr Keith Harvey said this was the death toll in communal lands affected by drought last year, and that it had probably been exceeded in the first five months of this year. He added that the beef industry still had to face the five most difficult months of the year before further rains could be expected. Mr Harvey told association members the industry's problems were attributable not simply to two successive years of drought, but also to "massive mismanagement of our natural resources." Millions of hectares of land in the south and east of the country have already become semi-desert, he said, adding that rehabilitation of ecologically devastated areas might be "beyond our capabilities." A major threat was being posed by degraded land which was rapidly silting up the Sabi and Lundi River systems and reducing irrigation potential, Mr Harvey said. [Excerpt] [Nairobi DAILY NATION in English 3 Jan 83 p 8]

DROUGHT HITS MIDDLE SABI--Drought problems hitting hard at almost all farmers in Zimbabwe are becoming increasingly serious for those in the Middle Sabi irrigated area, for two major reasons. One is the siltation of the river and the other the illegal "infiltration" of cattle into irrigated lands being operated by the commercial farmers in the area. According to the latest estimate of water availability for the Middle Sabi area, published in The Farmer magazine of May 9, only 3 370 ha of winter wheat will be able

to be grown there this season. A six-day power cut in January, the drought, heat and high winds have all combined towards lower yields. The increasing siltation from erosion is giving rise to serious concern. Farmers report that the water from their irrigation sprinklers is actually brown with silt. They said that a repetition of this last "rainy" season would be "calamitous." But according to the magazine, the greatest problem they are now experiencing is the effect of the cattle being pushed into lands. It was worked out that 12 000 bags of wheat were lost this year as a result of cattle damage. This represented a loaf of bread every two days for no less than 13 000 people for a whole year, said the magazine. The problem is being compounded by the lack of vegetation in surrounding areas. "We cannot stress how serious the problem is," said a spokesman for the farmers quoted in the report. "On the whole, it is even more disastrous for the 10ha settler farmers. They can be virtually ruined overnight. A neighbour has just had his fence cut and he was faced with 100 head of cattle in his soya crop for three nights running." The spokesman pointed out that production from the area has saved \$5,7 million in foreign currency for wheat the country needs. Cotton, also grown in the Middle Sabi, earned \$6,6 million in foreign currency and the soya crop is also essential. "We can only regard this illegal infiltration of cattle as sabotage to the national economy," said the farmer spokesman. [Text] [Harare THE FINANCIAL GAZETTE in English 20 May 83 p 3]

CSO: 5000/198

AZERBAIJAN OFFICIAL INTERVIEWED ON AIR POLLUTION PROBLEMS

Baku VYSHKA in Russian 10 Apr 83 p 3

[Article by A. Donets]

[Text] Dear Editors: Like other inhabitants of Baku I am bothered by contamination of the air. This is felt especially severely by sick and elderly people, and also children. The rapid growth of motor-vehicle transport in the presence of narrow, poorly ventilated streets, the growth of the number of traffic lights at intersections, the construction of ever newer boiler rooms--this is a far from complete list of the sources of air contamination. As far as I know from the pages of the press in many cities of the country much attention is being given to this problem and promising measures are being carried out to reduce the contamination of the environment. What is being done in this respect in Baku?

M. Mamedzade

Responding to the request of the author of the letter, the correspondent of "VYSHKA" A. Donets appealed to the deputy chairman of the State Committee for the Protection of Nature of the AzSSR Council of Ministers, M. V. Kuliyev.

"Every truth, as is well known, is learned in comparison," says Melik Beytulla-yevich. "From the medical point of view the air of a mountain forest is ideal. But you yourself understand that to achieve that ideal for all inhabitants on earth is impossible in practice. For urbanization, for all the good things the age of technological progress bears with itself, a price must be paid, and at times a large one, in the form of contamination of the environment, of destruction of the ecological equilibrium.

In our country, including in the republic, considerable efforts are undertaken to reduce or completely neutralize the harmful effect of industrial technology on the environment, including the air basin. In this work we use as a basis the decisions of the party and government, including air-preservation questions and requirements of the USSR Law "On preservation of the atmospheric air." It is indicative that starting in 1975 in our country a new section was introduced into the plans of economic development--on the preservation of nature and efficient use of natural resources.

The Republican Committee for the Preservation of Nature jointly with other interested organizations in the past year alone worked on the preservation of the air environment at 636 industrial enterprises as against 460 in 1981. As a result 213 regulations were issued on the elimination of revealed violations.

On the materials of tests a developed resolution was adopted which contained specific proposals and recommendations on the elimination of revealed violations and shortcomings.

What has been done specifically? The number of gas and dust collectors newly put in operation rose from 148 in 1981 to 212, and of repaired from 120 to 134. In addition, 40 installations were reconstructed.

As a result of accomplished measures, in spite of a considerable growth of the industrial potential of the republic, the ejection of harmful substances into the air was successfully stabilized, and for many types even considerably reduced. Thus the discharge of dust was reduced almost 50 percent, of sulfur dioxide by 67 percent in comparison with the past year, and of nitrogen dioxide by 10 percent.

At enterprises of the oil-refining industry, for example, discharges of harmful substances in 1982 were reduced by 20 percent as compared with 1981, and at the Sumgait aluminum plant by 35 percent. Discharges of harmful substances into the atmosphere also were considerably reduced at the Kirovabad aluminum and Sumgait superphosphate plants and at the "Khimprom" Production Association. A number of technological measures to reduce the discharges of harmful substances into the air have been carried out at enterprises of the Ministry of Housing and Municipal Services of the republic and at enterprises of union subordination.

Unfortunately, not not everywhere and far from everything has been done and is being done which could be done to reduce contamination of the air environment."

"Can you name specific offenders?"

"Yes, of course. Of planned air protective measures in the past year the following in particular were not fulfilled: the introduction into operation of three coloring chambers with hydraulic filters at the Kishlinsk machine-building plant, the installation of bag filters at the Baku steel foundry, the introduction of electrostatic precipitators at the Karagandag cement plant and a number of others. Particularly unjustified are inefficient purification structures at the Baku Combine of Asbestos-cement and Ceramic Articles, the Baku Bread Products Combine No 1, the Kirovabad foundry and the "Khimprom" Production Association."

"In the letter to the editors it speaks of the growing contamination of the air, especially in Baku, by motor vehicle transport. What is being done to reduce its contribution to the contamination of air in the city?"

"Actually the motor vehicle transport has become one of the main, if not the main source of air contamination in cities. It can be said that it is precisely to auto transport, and primarily to diesel motor vehicles, that we owe the fact that the discharge into the air of such a harmful substance as soot in the past year has not only not diminished but even has increased somewhat. And the matter here lies not only in the growth of motor vehicle transport on the streets of the city.

but also in the fact that many motor vehicles leave the production line technically unjustified, with a discharge of gases larger than that set by the standard. Of the 770 motor vehicles of various ministries and departments tested by us in the past year, about 200 machines, or about 20 percent, were forbidden to emerge on the line until necessary repairs were made. Such a large percentage of motor vehicles with exhaust gas above the allowed standard is explained by absence at a large number of auto enterprises of diagnostic posts. At 56 auto enterprises investigated in the past year there were diagnosis posts at only three--taxicab pools Nos 1, 4 and 5.

A second reason for considerable contamination of air by motor vehicles exhaust gases consists in inadequately effective organization of motor vehicle traffic--in the overloading of a number of transport deliveries, especially in the central part of the city, insufficiently efficient regulation of traffic by traffic lights, an absence of organization of the movement of motor vehicle transport in the 'green wave' rhythm, and an insufficient number of underground crossings."

"You have spoken above about the emergence on the line of a large number of faulty machines. In connection with that the question arises: are any measures at all being adopted toward the managers of auto enterprises who have allowed them?"

"Unquestionably. Last year we sent to the AzSSSR Procurature, for the adoption of sanctions, materials on managers of auto enterprises of the Administration of Ferrous Metallurgy of the republic and the Baku Territorial Transport No 1 of the Motorized Expeditionary Trust of the AzSSSR Ministry of Rural Construction. By the way, the Law on Preservation of the Atmospheric Air provides a whole series of such sanctions, extending as far as criminal responsibility.

"And a last question. What is being done at present to reduce the air contamination by motor-vehicle transport?"

"For this year we have developed a working program of research and of monitoring of discharge gases of motor transport on the main highways of Baku. A highly efficient imported portable laboratory for monitoring the degree of contamination of the environment--water, air and soil--has been acquired and has already started to work. In accordance with that program we will issue specific recommendations, especially for the State Automobile Inspection, on the organization of road traffic within the city, and also a forecast of air contamination with harmful substances contained in exhaust gases. The first such recommendations will be issued by the laboratory as early as May.

"Contemplated in the long term is a transition of the entire motor-vehicle transport to liquefied gas and the construction for that purpose in Baku of a shop for filling compressed gas cylinders and a shop for the re-equipment of motor vehicles for gaseous cylinder fuel. It is proposed to reduce the number of bus routes, especially in the center of the city, and increase the number of trolleybus lines. In addition, small combines will be relocated beyond the limits of the city, and also an asphalt-concrete plant now in Leninskiy rayon, a radical reconstruction will be completed of the petroleum refineries imeni Vladimir Il'ich and 22nd CPSU Congress, with the subsequent elimination of the plants imeni Karayev and "Neftegaz."

"So that it should be added that recently under the Azerbaijan republic Administration for Hydroleteorology and Monitoring the Environment was created a State Expedition for Monitoring Atmospheric Air for the AzSSR. Its main task is assuring the performance by all the ministries, departments, enterprises and organizations of measures on preservation of the atmospheric air, observance of the conditions of substances contaminating them and effective rules established by the legislation on preservation of the atmospheric air.

"It will carry out its work in close contact with the local party, soviet and nature conservation organs, including the State Committee for the Protection of Nature, the State Auto Inspectorate, the Ministry of Justice of the republic and with the regional Expedition of Gas and Dust Collection Installations.

"All these measures will permit considerably normalizing the air we breathe with you. And that will occur in the very near future."

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CSO: 5000/107

REVIEW OF BELORUSSIAN MEASURES FOR PROTECTION OF NATURAL RESOURCES

Minsk SEL'SKAYA GAZETA in Russian 20 Apr 83 p 1

[Article]

[Text] Having examined the materials on the results of the 1982 republic socialist competition for the preservation of nature and the efficient use of natural resources, the Communist Party of Belorussia Central Committee, the Belorussian SSR Council of Ministers, the Belorussian Republic Council of Trade Unions and the Belorussian Leninist Komsomol Central Committee note that the party, soviet, trade union and Komsomol organs, enterprises and organizations, kolkhozes and sovkhozes, implementing the decisions of the 26th CPSU Congress and the 29th Congress of the CP Belorussia, did considerable work on the mobilization of labor collectives to execute state plans for the preservation of nature and the efficient use of natural resources and on the basis of increase of the effectiveness of work have achieved definite successes in the implementation of measures directed toward the preservation of agricultural and forest lands, the prevention of contamination of atmospheric air, the soil, surface and ground waters, the preservation and enrichment of flora and fauna.

The Central Committee of the Communist Party of Belorussia, the BSSR Council of Ministers, the Belorussian Council of Trade Unions and the Belorussian Komsomol have decided to acknowledge the winners in the republic socialist competition for the preservation of nature and the efficient use of natural resources between the oblasts and the city of Minsk--the city of Minsk, between the cities and urban regions--the city of Borisov, and between the rural regions--Kalinkovichskiy rayon.

In Minsk in 1982 capital investments for the preservation and efficient use of natural resources were organized by 105 percent. The plan for the introduction of equipment for purification of waste waters was fulfilled and the consumption of recirculated and successively used water in production processes was increased by 18 percent in comparison with the plan. The planned tasks for the introduction of equipment for the recovery and rendering harmless of harmful substances from discharge gases were overfulfilled by 25 percent, and the quantity of harmful substances discharged into the atmosphere was reduced by a factor of 2.8 in comparison with the plan. Much work has been done on landscaping and putting the city in good order. Other measures directed toward the preservation of the waters and air of the basin of the city have been carried out.

In Borisov in 1982 capital investments for the preservation and efficient use of natural resources were organized by 121.1 percent. The plan for the introduction of equipment for the purification of waste waters was fulfilled; planned tasks for the consumption of recirculated and successively used water in production processes were overfulfilled by 81.4 percent. Much work has been done on the landscaping and improvement of the sanitary state of the city.

In Kalinkovichskiy rayon in 1982 capital investments on the preservation and efficient use of natural resources were organized by 119 percent. Plans were implemented for the introduction into operation of equipment for the purification of waste waters and installations for the recovery and rendering harmless of harmful substances from discharge gases, as was the the plan for protection of soils against erosion. Considerably more land has been recultivated than was planned, biotechnical measures have been carried out on the preservation and reproduction of wild animals and birds, and also measures to protect the forests against pests and diseases by a biological method.

For the attained high indicators in fulfillment of the plans of measures for natural preservation of the cities of Minsk, Borisov and Kalinkovichskiy rayon, Challenge Red Banners of the Central Committee of the CP Belorussia, the Council of Ministers of the BSSR, the Belorussian Council of Trade Unions and the Belorussian Komsomol Central Committee were awarded, and also diplomas with monetary prizes.

Note was made of the active work of party, soviet, trade union and Komsomol organs, labor collectives of enterprises, institutions and organizations of the city of Osipovich, Leninskiy rayon, Grodno, Berezovskiy, Smorgonskiy, Borisovskiy, Dokshitskiy and Kirovskiy rayons on the preservation of nature and the efficient use of natural resources.

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CSO: 5000/106

PROGRESS REVIEW OF BELORUSSIAN ENVIRONMENTAL ACTIVITY

Minsk SOVETSKAYA BELORUSSIYA in Russian 6 Apr 83 p 4

[Article by T. Khayutina, junior scientific staff member of the Belorussian Scientific and Technical Information Scientific Research Institute: "A Problem Arises--Man and the Biosphere: Scientific and Technical Progress is Making the Problem of Protecting the Environment--Land, Lakes, Rivers and the Air--More and More Urgent"]

[Text] In recent years, a great deal of work has been done not only to reinforce protection of the environment, but also to improve utilization of natural resources. For example, measures taken in the area of land resources have significantly improved their structure. The potential yield from soils has been increased and areas of valuable agricultural land have been stabilized. Approximately 100,000 hectares of land that was disrupted by industry have been recultivated and are now being used in the national economy. A great deal of work has been done in the campaign against soil erosion. There are almost 70,000 hectares that were once covered with sand and cut with ravines, where today tips of trees reach for the sun. A system of shelter belts is being created. Almost 35 percent of the republic's territory is now covered by forests.

Everyone knows that there is no product in the country cheaper than drinking water. When there is enough of it, water costs nothing. But when there is not enough water, there is nothing more expensive. Therefore special attention is given in Belorussia to the economy and protection of water resources. At industrial enterprises systems have been created for circulating and recycling the water supply. At the Belorussian Motor Vehicle Plant rationalizers produced and installed a small saltern which became a heat exchanger. This cooling circulation system now guarantees normal operation of the equipment and removes the need to dump water into the sewer system. The system is simple in design, but its effect is obvious: the drinking water saved at the enterprise over just one year after the device was put into use was 510,000 cubic meters. The centralized sewer systems with equipment for complete biological purification of the water that have been built in the majority of cities in the republic are highly efficient. This set of water management measures will make it possible in the sufficiently distant future to meet the water demands of the population, industry and agriculture.

The intensive development of industry in the republic presents the task of protecting the air and the atmosphere. Over recent years hundreds of gas filters have been built and reconstructed at enterprises. A great deal of work in this direction has been done in the capital of Belorussia, Minsk.

Viktor Iyosifovich Sharzhanovich, deputy director of the Minsk Center for the Study of Environmental Pollution Control, said, "Scientists are noting that Minsk is at a lower than average level in terms of air pollution compared to other cities in the country with industrial development and a population of more than 1 million people. There are, however, zones of air pollution here. Naturally, they are located in areas where there are large industrial enterprises. There is also a high level of pollution along the major highways."

Currently the Belorussian Republic Administration of Meteorology and Environmental Control, the Minsk City Health and Epidemiology Station and other organizations are developing plans for norms of maximum acceptable levels of substances released into the atmosphere. Similar plans are being developed at industrial enterprises in the capital. This will make it possible to intensify supervision over exploitation of equipment at industrial enterprises, over capital investments made for environmental protection activities and it will reduce significantly the amount of harmful substances released into the atmosphere.

Other measures also play a large role in maintaining clean air in the city. Among these is the creation of special water systems. In the current five-year plan, there are plans to complete construction of the Stepyanskaya water system and begin construction of the Loshitskaya water system. Green plantings play a particularly important role in removing pollutants from the air. There are plans to increase significantly their area in the near future. It should be recalled here, however, that coniferous trees are considerably worse at cleansing the air and are more vulnerable to the harmful effects of substances released into the air, such as nitric oxides, carbons and other highly toxic elements. Therefore deciduous trees provide the most beneficial effects in an urban location.

It must be noted, however, that far from all the possibilities for improving environmental protection are being fully utilized. Take, for example, the processing of wastes. Scientists have established that the volume of household wastes alone increases by 3.5 percent every year. This figure does not seem so great, but it really is. Household wastes, consisting of paper, rubber, leather, bones, metals, wood and food, end up in the garbage dump and quickly decompose. This leads to a large quantity of harmful substances being released into the air--carbon monoxide, sulfur and its combinations, nitrogen dioxide, dust and hydrocarbons. The wastes pollute not only the air, but also the soil and underground water. They destroy the beauty of the landscape and take up a great deal of space that could be used for crop cultivation and housing.

Plants for processing and incinerating the trash will help solve this problem. An enterprise for processing wastes has been operating for several years

already near Minsk. During the design of the plant, plans were made to turn wastes into compost, extract metals and generate heat. Thus the income from the processing products should be more than one ruble from each cubic meter of waste. However, only 6 percent of the planned volume of waste is now being processed at this enterprise. The plant does not produce heat because the second stage of the enterprise has not been put into operation.

It is estimated that even when the planned capacity is reached, the Minsk plant will be able to process only one-third of the household waste. And what should be done with the rest? This question must be solved, not only in Minsk, but in other cities in the republic.

According to scientists' estimates, utilization of solid household wastes to generate heat will make it possible to save about three percent of the fuel consumed in Belorussia. If this is translated into rubles, the figure is quite impressive. Unfortunately, this method has not found a practical application. Only after the second stages of the Minsk and Gomel processing enterprises are put into operation will an income be obtained by generating heat through incineration of household wastes. Construction of these specialized enterprises in Vitebsk, Mogilev, Bobruysk, Grodno and other large cities would make it possible to process over 2 million tons of household wastes per year. Thus, the problem is quite a significant one, and the sooner it is solved, the greater the benefit will be.

Among the urgent tasks in environmental protection today are those involving protection of unique natural complexes, rare, disappearing animals and plants, reproduction of valuable types of fish in natural reservoirs, and so on. Expenditures on these measures has increased by a factor of 3 over the past 10 years. A Red Book of rare and disappearing types of animals and plants has been published in the republic. All this work is being carried out in accordance with industrial predictions, general plans and models for overall utilization and protection of natural resources. Joint participation by scientists, planners, specialists from different sectors of the national economy and community representatives will allow us to do everything possible to protect nature, and thus the health of the people.

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July 13, 1983